We have other concerns as well. One of them being the fear that we could experience a reduction in irrigation water if grazing is discontinued. You see, the meadow lands that make up the heart of our ranching operation are completely dependent on the waters that flow from the Wilson Creek, Tipton Creek, and Dawley Creek watersheds - all of which are covered to a large degree with heavy stands of quaking aspen, chokecherry and wild rose.

We know from experience that if grazing is eliminated on the mountain, there will be an increase in woody vegetation. It's already happening. Because of reduced livestock use over the last eight to ten years, we are already seeing many of the small meadows and open areas being taken over by quaking aspen. That is one of the reasons we have been wanting to return to pre-1984 grazing levels.

The fact that increased woody vegetation often results in decreased water flows is not a new science. In 1976 the United States Department of Agriculture published a report titled, *FOREST AND WATER: effects of forest management on floods, sedimentation, and water supply.* At the beginning of the report it is stated:

> "...in 1909 the first forest watershed study in the United States was started at Wagon Wheel Gap, Colorado... In the early 1930's. the U.S. Forest Service started additional research at the San Dimas Experimental Forest in southern California, the Sierra Ancha Experimental Forest in central Arizona, and the Coweeta Hydrologic Laboratory in western North Carolina... By 1970 almost 2,000 papers had been published describing results of research on watershed management."

Principle findings pertinent to this discussion can be found on pages 50 and 51 where it is stated:

> "Brushland has been converted to grassland range in California to increase water yield and forage production. Differences in water yield may be chiefly a matter of rooting depth, since the shallower rooting grass transpires less moisture than trees... Root depth was the key to difference in water use between trees and grass in western Colorado. Quaking aspen used 19 inches of water, spruce 15, and grass 9 inches during the growing season... In Arizona, conversion of brush to grass increased streamflow from small watersheds by one-third... In another Arizona study, conversion from chaparral to grass increased water discharge by four times... (See Document 78)

We know there have been no studies completed in South Ruby Valley showing that the lack of grazing would result in reduced water production. But that's the problem. The National Environmental Policy Act (NEPA) requires analysis of proposed

actions and disclosure of possible consequences. In this particular case, Forest personnel have failed to adequately assess all possible impacts to the physical and socio-economic environment.

We are also reminded that one of the two primary reasons for the creation of Forest Reserves, as stated in the Organic Administrations Act, is for the purpose of securing continuous water flows.